

**Federal Aviation Administration, DOT**

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both, to ensure competence to conduct the flight instruction required by this part.

[Doc. No. 28471, 61 FR 30745, June 17, 1996; 61 FR 34927, July 3, 1996; 62 FR 3739, Jan. 24, 1997]

**§ 135.341 Pilot and flight attendant crewmember training programs.**

(a) Each certificate holder, other than one who uses only one pilot in the certificate holder's operations, shall establish and maintain an approved pilot training program, and each certificate holder who uses a flight attendant crewmember shall establish and maintain an approved flight attendant training program, that is appropriate to the operations to which each pilot and flight attendant is to be assigned, and will ensure that they are adequately trained to meet the applicable knowledge and practical testing requirements of §§ 135.293 through 135.301. However, the Administrator may authorize a deviation from this section if the Administrator finds that, because of the limited size and scope of the operation, safety will allow a deviation from these requirements.

(b) Each certificate holder required to have a training program by paragraph (a) of this section shall include in that program ground and flight training curriculums for—

- (1) Initial training;
- (2) Transition training;
- (3) Upgrade training;
- (4) Differences training; and
- (5) Recurrent training.

(c) Each certificate holder required to have a training program by paragraph (a) of this section shall provide current and appropriate study materials for use by each required pilot and flight attendant.

(d) The certificate holder shall furnish copies of the pilot and flight attendant crewmember training program, and all changes and additions, to the assigned representative of the Administrator. If the certificate holder uses training facilities of other persons, a copy of those training programs or appropriate portions used for those facilities shall also be furnished. Curricula that follow FAA published curricula may be cited by reference in the copy of the training program furnished to

the representative of the Administrator and need not be furnished with the program.

[Doc. No. 16097, 43 FR 46783, Oct. 10, 1978, as amended by Amdt. 135-18, 47 FR 33396, Aug. 2, 1982]

**§ 135.343 Crewmember initial and recurrent training requirements.**

No certificate holder may use a person, nor may any person serve, as a crewmember in operations under this part unless that crewmember has completed the appropriate initial or recurrent training phase of the training program appropriate to the type of operation in which the crewmember is to serve since the beginning of the 12th calendar month before that service. This section does not apply to a certificate holder that uses only one pilot in the certificate holder's operations.

[Doc. No. 16097, 43 FR 46783, Oct. 10, 1978, as amended by Amdt. 135-18, 47 FR 33396, Aug. 2, 1982]

**§ 135.345 Pilots: Initial, transition, and upgrade ground training.**

Initial, transition, and upgrade ground training for pilots must include instruction in at least the following, as applicable to their duties:

- (a) General subjects—
  - (1) The certificate holder's flight locating procedures;
  - (2) Principles and methods for determining weight and balance, and runway limitations for takeoff and landing;
  - (3) Enough meteorology to ensure a practical knowledge of weather phenomena, including the principles of frontal systems, icing, fog, thunderstorms, windshear and, if appropriate, high altitude weather situations;
  - (4) Air traffic control systems, procedures, and phraseology;
  - (5) Navigation and the use of navigational aids, including instrument approach procedures;
  - (6) Normal and emergency communication procedures;
  - (7) Visual cues before and during descent below DH or MDA; and
  - (8) Other instructions necessary to ensure the pilot's competence.
- (b) For each aircraft type—
  - (1) A general description;
  - (2) Performance characteristics;

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- (3) Engines and propellers;
- (4) Major components;
- (5) Major aircraft systems (i.e., flight controls, electrical, and hydraulic), other systems, as appropriate, principles of normal, abnormal, and emergency operations, appropriate procedures and limitations;
- (6) Knowledge and procedures for—
  - (i) Recognizing and avoiding severe weather situations;
  - (ii) Escaping from severe weather situations, in case of inadvertent encounters, including low-altitude windshear (except that rotorcraft pilots are not required to be trained in escaping from low-altitude windshear);
  - (iii) Operating in or near thunderstorms (including best penetrating altitudes), turbulent air (including clear air turbulence), icing, hail, and other potentially hazardous meteorological conditions; and
  - (iv) Operating airplanes during ground icing conditions, (i.e., any time conditions are such that frost, ice, or snow may reasonably be expected to adhere to the airplane), if the certificate holder expects to authorize takeoffs in ground icing conditions, including:
    - (A) The use of holdover times when using deicing/anti-icing fluids;
    - (B) Airplane deicing/anti-icing procedures, including inspection and check procedures and responsibilities;
    - (C) Communications;
    - (D) Airplane surface contamination (i.e., adherence of frost, ice, or snow) and critical area identification, and knowledge of how contamination adversely affects airplane performance and flight characteristics;
    - (E) Types and characteristics of deicing/anti-icing fluids, if used by the certificate holder;
    - (F) Cold weather preflight inspection procedures;
    - (G) Techniques for recognizing contamination on the airplane;
- (7) Operating limitations;
- (8) Fuel consumption and cruise control;
- (9) Flight planning;
- (10) Each normal and emergency procedure; and

- (11) The approved Aircraft Flight Manual, or equivalent.

[Doc. No. 16097, 43 FR 46783, Oct. 10, 1978, as amended by Amdt. 135–27, 53 FR 37697, Sept. 27, 1988; Amdt. 135–46, 58 FR 69630, Dec. 30, 1993]

**§ 135.347 Pilots: Initial, transition, upgrade, and differences flight training.**

- (a) Initial, transition, upgrade, and differences training for pilots must include flight and practice in each of the maneuvers and procedures in the approved training program curriculum.
- (b) The maneuvers and procedures required by paragraph (a) of this section must be performed in flight, except to the extent that certain maneuvers and procedures may be performed in an aircraft simulator, or an appropriate training device, as allowed by this subpart.
- (c) If the certificate holder's approved training program includes a course of training using an aircraft simulator or other training device, each pilot must successfully complete—
  - (1) Training and practice in the simulator or training device in at least the maneuvers and procedures in this subpart that are capable of being performed in the aircraft simulator or training device; and
  - (2) A flight check in the aircraft or a check in the simulator or training device to the level of proficiency of a pilot in command or second in command, as applicable, in at least the maneuvers and procedures that are capable of being performed in an aircraft simulator or training device.

**§ 135.349 Flight attendants: Initial and transition ground training.**

Initial and transition ground training for flight attendants must include instruction in at least the following—

- (a) General subjects—
  - (1) The authority of the pilot in command; and
  - (2) Passenger handling, including procedures to be followed in handling deranged persons or other persons whose conduct might jeopardize safety.
- (b) For each aircraft type—